

WHAT IS CLAIMED IS:

1. A gas sensor element comprising a measurement  
gas chamber for introducing thereinto a measurement gas  
5 from the outside, a sensor cell, and an electrochemical  
cell;

said sensor cell comprising an active electrode  
facing said measurement gas chamber, a first reference  
electrode forming a pair with the active electrode, and a  
10 solid-electrolyte plate having both the electrodes, and  
being so constructed that the concentration of a specific  
gas in said measurement gas chamber is detectable; and

said electrochemical cell comprising an inactive  
electrode facing said measurement gas chamber and being  
15 inactive to the specific gas, a second reference  
electrode forming a pair with the inactive electrode, and  
a solid-electrolyte plate having both the electrodes;

said inactive electrode comprising a metallic  
material containing at least one selected from Au, Ag, Cu  
20 and Pb and an additional metallic material Rh.

2. The gas sensor element according to claim 1,  
wherein said additional metallic material Rh is added in  
an amount of from 0.01 to 3.0% by weight as outer  
25 percentage, based on 100% by weight of the metallic

material.

3. The gas sensor element according to claim 1,  
wherein said electrochemical cell is an oxygen pumping  
5 cell which is so constructed as to pump oxygen into, or  
from, said measurement gas chamber.

4. The gas sensor element according to claim 1,  
wherein said electrochemical cell is an oxygen monitor  
10 cell which is so constructed that the concentration of  
oxygen in said measurement gas chamber is detectable.

5. The gas sensor element according to claim 1,  
wherein said metallic material of the inactive electrode  
15 further contains Pt.

6. The gas sensor element according to claim 1,  
wherein said metallic material contains Au.

20 7. The gas sensor element according to claim 1,  
wherein said metallic material contains Ag.

8. The gas sensor element according to claim 1,  
wherein said metallic material contains Cu.

9. The gas sensor element according to claim 1,  
wherein said metallic material contains Pb.

10. The gas sensor element according to claim 5,  
5 wherein said metallic material contains Au.

11. The gas sensor element according to claim 5,  
wherein said metallic material contains Ag.

10 12. The gas sensor element according to claim 5,  
wherein said metallic material contains Cu.

13. The gas sensor element according to claim 5,  
wherein said metallic material contains Pb.